

lows a larger proportion of the circulating L-dopa to be utilized by the brain in the formation of dopamine. This more efficient utilization of L-dopa permits the use of much smaller doses, which decreases the gastrointestinal distress but does not appreciably diminish the other side effects. Although the dopa-decarboxylases are available at present only for experimental use, the apparent absence of severe toxicity makes it likely that they will be released soon for general use.

Long term maintenance on L-dopa although not usually resulting in decreased control of the symptoms of parkinsonism, may cause the appearance of additional evidences of intolerance. These differ slightly from the side effects occurring early and include abnormal involuntary movements, impairment of cerebation and episodic loss of muscle tone so great and sudden that the patient may fall. Management of these complications requires reduction of the dosage, although frequently the symptoms will reappear after a time at the lower dosage. Discontinuing the drug may be necessary. Although difficult to confirm statistically, it appears that in some cases L-dopa slows or prevents the usual progression of Parkinson's disease.

In summary, L-dopa is very effective in alleviating most of the symptoms of parkinsonism, but its use requires careful adjustment of dosage and close observation of the patient. The use of L-dopa in the treatment of other movement disorders has been, in general, disappointing.

DONALD I. PETERSON, M.D.

GUY M. HUNT, M.D.

REFERENCES

Langral H, Joseph C: Evaluation of safety and efficacy of levodopa in Parkinson's disease and syndrome. *Neurology* 22 (Part 2):3-16, May 1972

Cotzias G, Papavasiliou P, Duby S, et al: Some newer metabolic concepts in the treatment of parkinsonism. *Neurology* 22 (Part 2):82-85, May 1972

Alpha Rhythms and What They Mean

THE ALPHA RHYTHM is to the brain what the electrocardiogram is to the heart. However, while we know the significance of the latter rather precisely, that of the alpha rhythm remains an

enigma. Nevertheless, alpha rhythms (there is one for each hemisphere) are very useful in electroencephalogram diagnosis since they reflect maturational processes and tend to be suppressed by mass lesions such as tumors.

The alpha rhythm closely reflects the state of consciousness and there has recently been great interest in rendering it audible by special electronic monitors. In listening to this alpha rhythm, a subject completes a feedback loop (bio-feedback) and can learn to enhance or suppress this activity. Some have claimed that the process of feedback enhancement represents a special state of consciousness related to meditative experience. There are some indications that these induced states may have therapeutic value in reducing anxiety and tension.

Computer analysis of the alpha rhythm has recently revealed the presence of many unsuspected components in what was formerly regarded as a trivial ten cycle sine wave. These newly demonstrated alpha components may contain information which will provide further insight into brain function.

REGINALD G. BICKFORD, M.B., B.CHIR., F.R.C.P.

REFERENCE

Tart CT: *Altered States of Consciousness: A Book of Readings*. New York. Wiley & Sons, 1969

Myasthenia Gravis

DESPITE THE FACT that the conventional anticholinesterase medications such as neostigmine methylsulfate (Prostigmin®), pyridostigmine bromide (Mestinon®), and ambenonium chloride (Mytelase®) continue to be widely used in the management of myasthenia gravis, other modes of therapy must be considered.

It has been shown recently that patients who are relatively refractory to anticholinesterase drugs or who cannot tolerate them may respond dramatically to high doses of prednisone (100 mg) administered on alternate days. While the patient is receiving steroids, all forms of anticholinesterase medication must be withheld and the patient must be carefully monitored for possible complications of the disease and steroid